REMARKS

This Amendment is responsive to the Office Action mailed on October 12, 2007, rejecting all pending claims 1-7, 9-13 and 23-27. By this response claim 1 is amended and claims 5, 12 and 24-27 are canceled. Reconsideration and allowance of claims 1-4, 6, 7, 9-11, 13 and 23 are requested.

The undersigned attorney thanks Examiner Van for the telephone interviews on December 11, 2007 and January 3, 2008. During the December 11 interview, claim 1 was discussed in connection with the Cowles U.S. Patent 6,700,748. In particular, the applicant's attorney asserted that the Cowles patent fundamentally discloses a soldering process requiring reflow, even though an electroplating process is used to initially deposit the solder in the via. The applicant's claimed invention, on the other hand, is an electroplating process for forming an electroplated interconnect. The claim language reciting the incorporation of the suspension into a disk drive with the plated interconnect having the physical structure of the conductive material as electroplated was pointed to by the applicant's attorney as distinguishing the claimed invention from the reflowed solder interconnect shown in the Cowles patent. No agreement was reached, although the Examiner agreed to consider further arguments.

For the January 1 interview, the applicant's attorney submitted a proposed claim amendment with amendments substantially the same as those presented herein to recite the electroplated material as nickel or nickel alloy on a stainless steel spring metal layer, and the removal of oxide from the stainless steel layer to produce an oxide-removed layer at the interconnect site. The applicant's attorney asserted that these claim amendments further distinguished the electroplating process of the invention from the soldering process shown in the Cowles patent since common solders are not typically nickel-based materials. The applicant's attorney also asserted that the application specification supports the recited claim language regarding the incorporation of the suspension into a disk drive with the plated interconnect having the physical structure of the conductive material as electroplated. Again, no agreement was reached.

Claim 1 and its dependent claims stand rejected in the Office Action under 35 U.S.C. § 103 as being unpatentable over the Cowles patent and one or more of the Rinne U.S. Patent 6,117,299, the Shangguan U.S. Patent 6,082,610, the Young U.S. Patent 4,855,871 and the Gay U.S. Patent 4,764,260. The applicant respectfully disagrees with this position because the Cowles patent discloses what is fundamentally a soldering process for forming an electrical interconnect. Solder, which is commonly a tin and lead-based material, is initially electroplated into the via. Consistent with a soldering process, the solder in the via is then reflowed to form the electrical interconnect. The mechanical bond and electrical connection between the solder and the stainless steel is therefore remade after the initial deposition of the solder.

The applicant's invention, on the other hand, is fundamentally an electroplating process for forming an interconnect. To distinguish this process from the prior art of record, claim 1 is amended to recite nickel or nickel alloy as the conductive material that is electroplated to form the interconnect. Oxide is removed from the exposed stainless steel spring metal layer to form an oxide-removed surface on which the nickel material is electroplated. Claim 1 is also amended to characterize the integrated lead suspension as one for incorporation into a disk drive with the plated nickel or nickel alloy interconnect having the physical structure of the conductive material as electroplated.

Since the Cowles patent focuses on a soldering process that requires a reflow step to form a suitable mechanical bond and electrical connection, this patent does not teach or suggest an electroplating process for forming an interconnect. The reliance on this patent's disclosure of electroplating as the preliminary step for depositing the solder is based on impermissible hindsight and the benefit of the applicant's disclosure. Unlike the electroplating process of the claimed invention, the soldering process of the Cowles patent does not suggest the use of nickel-based materials for the interconnect. And because the claimed invention is an electroplating process where the physical structure of the interconnect material as electroplated is for incorporation into a disk drive, a suitable mechanical bond and electrical interconnection should be formed between the stainless steel layer and the electrical interconnect by the electroplating process. In the applicant's

invention this result is achieved by the recited oxide removal step. No such oxide removal or similar step for enhancing the bond and interconnect between the solder and stainless steel is shown in the Cowles patent. Again, this is likely because the Cowles patent is fundamentally a soldering process, not an electroplating process.

These features of the applicant's claimed invention are neither taught nor suggested by the other references of record either, whether alone or in connection with the Cowles patent. Withdrawal of the §103 rejections are requested for these reasons.

The Office Action also rejected the claims under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the position was taken that the disclosure does not provide a clear indication to support the incorporation of the suspension into a disk drive with the plated interconnect having the physical structure of the conductive material as electroplated. The applicant respectfully disagrees with this position. It is clearly evident from the specification as a whole that suspensions including the disclosed plated interconnects are intended for incorporation in disk drives following their fabrication. This is the well-known purpose of suspensions of the type described in the application. By this response, however, claim 1 is amended to characterize the suspension as one for incorporation into a disk drive with the interconnect having the physical structure of the conductive material as plated. Since this feature of the invention is readily evident to those of skill in the art from a review of the applicant's specification, withdrawal of the §112 rejection is requested.

In conclusion, entry of this Amendment and allowance of claims 1-4, 6, 7, 9-11, 13 and 23 are requested.

Respectfully submitted,

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